

Appl. No. 09/534,461
Amdt. dated May 30, 2003
Amendment under 37 CFR 1.116 Expedited
Procedure Examining Group

PATENT

REMARKS/ARGUMENTS

The Office Action dated March 5, 2003 rejected claims 1-24 under Section 103(a) as unpatentable over Joao in view of Andreiko et al. (USPN 5,683,243). As detailed below, Applicants respectfully traverse the rejections and submit that all claims are in condition for allowance.

Applicant respectfully traverses the rejection and notes that the present rejection does not establish *prima facie* obviousness under 35 U.S.C. § 103 and M.P.E.P. §§ 2142-2143. The Examiner bears the initial burden to establish and support *prima facie* obviousness. *In re Rinehart*, 189 U.S.P.Q. 143 (CCPA 1976). To establish *prima facie* obviousness, three basic criteria must be met. M.P.E.P. § 2142. First, the Examiner must show some suggestion or motivation, either in the Joao reference, the Andreiko et al. reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference so as to produce the claimed invention. M.P.E.P. § 2143.01; *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Secondly, the Examiner must establish that there is a reasonable expectation of success for the modification. M.P.E.P. § 2142. Thirdly, the Examiner must establish that the prior art references teach or suggest all the claim limitations. M.P.E.P. § 2143.03; *In re Royka*, 180 U.S.P.Q. 580 (CCPA 1974). The teachings, suggestions, and reasonable expectations of success must be found in the prior art, rather than in Applicant's disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (CAFC 1991). Applicant respectfully submits that a *prima facie* case of obviousness has not been met because the Examiner's rejection fails on at least two of the above requirements.

First, Applicant notes that neither Joao nor Andreiko et al. teaches or suggests all the claim limitations of independent claim 1. In particular, independent claim 1 recites, in part, a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.

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The Office Action admitted that "Joao does not explicitly disclose one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth relating to the community; and each patient including 3D computer models of teeth and performing patient data visualization in response to a user request." Page 3 of Office Action dated March 5, 2003.

The Office Action relied on Andreiko's Figs. 3A, 3B, and 6 and Col. 39, lines 1-67 to Col. 40, line 5 to show the missing aspect. However, Andreiko's Figs. 3A, 3B, and 6 simply show digital models of teeth, while Cols. 39-40 relate to the digital probe tooth profile step in Andreiko. Cols. 39-40 relates to tools to produce a digitized computer model of teeth. However, nothing in Andreiko shows a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.

In Andreiko, the communication is one-way from the doctor to the appliance facility and there is no need for claim 1's a network to communicate manipulable three-dimensional (3D) computer models of a patient's teeth relating to the community and a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request. The word "server" does not exist in Andreiko.

Andreko discloses that:

(85) Patient Evaluation Operation

Referring to the system diagram of FIG. 1 and the flow chart of FIG. 2, the orthodontic evaluation operation (85) is performed at a doctor's office 11. The operation (85) includes the procedures (90) of the examination of a patient 12, (91) the preparation of the model 20 of the patient's mouth and teeth, (92) the prescription by the orthodontist 14 of treatment, (93) and communication the appliance facility 13.

The examination procedure (90) the patient 12, who requires orthodontic treatment, is examined by an orthodontist 14, who makes a diagnosis 15 of the condition of the patient and of the treatment, if any, needed. Based on the

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diagnosis 15, the orthodontist or doctor 14 assembles the information 16 that is necessary to implement the prescribed treatment.

In assembling the information 16, the orthodontist 14 (91) prepares a model of the patient's mouth 18, usually a physical model 20 from a mold of the patient's mouth, in its initial condition at the time of the diagnosis 15. The model 20 includes the mandibular model 21 of the patient's lower jaw or mandible 22 and the maxillary model 23 of the patient's upper jaw or maxilla 24.

Then, further based on the diagnosis 15, the orthodontist 14 (92) prescribes a particular treatment and generates a prescription 27 in a tangible record form.

The orthodontist 14 then (93) communicates the information 16, for example, by transmitting the model 20, the prescription for treatment 27, a record of information 17 identifying the doctor 14 and the patient 12, together with information 19 containing statistical and historic data of the patient 12, to an appliance design facility 13, at some remote location. At the appliance design facility 13, the information 16 is digitized and input into the computer 30 for analysis.

Alternatively, the orthodontist 14 may convert the information 16 to digital computer readable form and transmit the digitized information to the appliance design facility 13. In this alternative, the system 10 would be configured with the input computer 30 located at the orthodontist's office 11, and the orthodontist 14 or assisting personnel would perform portions of an data input procedure (94) described below.

As shown above, communication is one way from the doctor to the appliance design facility. In contrast, claim 1 requires a network to communicate information comprising manipulable three-dimensional (3D) computer models of a patient's teeth relating to the community; one or more patients coupled to the network; one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth; and a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.

Similarly, claim 11 requires transmitting teeth data associated a patient from a dental server to a treating professional computer over the Internet upon an authorized request; displaying a three-dimensional computer model of the teeth at the treating professional computer

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using a browser; allowing a treating professional to manipulate the three-dimensional computer model of the teeth using the browser; transmitting the computer model from the treating professional computer to the server; and generating an appliance to treat the patient based on the computer model of the teeth. Nothing in Joao or Andreiko show such claimed specifics.

As to claim 21, neither Joao nor Andreiko shows a data storage device coupled to the processor and adapted to store data including manipulable 3D dental model for each patient; and software to communicate 3D patient data in response to a client request over the network.

Secondly, Applicant notes that no motivation or suggestion, either in the cited art reference or in the knowledge generally available to one of ordinary skill in the art, has been cited by the Examiner to modify the Andreiko et al. reference so as to produce the claimed invention. As noted above, the Andreiko et al. reference fails to teach or suggest a network to communicate information comprising manipulable three-dimensional (3D) computer models of a patient's teeth relating to the community; one or more patients coupled to the network; one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth; and a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.

Further, Applicants fail to identify any motivation to modify the reference teaching so as provide interpolating positional differences to produce intermediate digital data sets of tooth arrangements as presently claimed. In fact, the Andreiko et al. reference teaches away from Applicant's invention as Andreiko et al. teaches one way transmission of data from the doctor to the appliance fabrication facility. One skilled in the art would have been generally discouraged from providing a network to communicate information comprising manipulable three-dimensional (3D) computer models of a patient's teeth relating to the community; one or more patients coupled to the network; one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth; and a server coupled to the

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network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.

Applicant points out that the Examiner bears the initial burden of factually establishing and supporting any *prima facie* conclusion of obviousness. *In re Rinehart*, 189 U.S.P.Q.143 (CCPA 1976); M.P.E.P. § 2142. If the Examiner does not produce a *prima facie* case, the Applicant is under no obligation to submit evidence of nonobviousness. *Id.* In the instant case, the Examiner has not pointed to any evidence in Andreiko et al., or how knowledge of those skilled in the art, provide a suggestion or motivation to modify the reference teaching so as to produce the claimed invention of claim 1 of a network to communicate information comprising manipulable three-dimensional (3D) computer models of a patient's teeth relating to the community; one or more patients coupled to the network; one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth; and a server coupled to the network, the server storing data for each patient including 3D computer models of teeth and performing patient data visualization in response to a user request.. See *In re Zurko*, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001) ([T]n a determination of patentability the Board cannot simply reach conclusions based on its understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings).

Under *Vaeck*, absent any evidence of a cited suggestion or reasonable motivation in the Andreiko et al. reference, or knowledge of those skilled in the art, for interpolating positional differences to produce successive digital data sets of tooth arrangements, *prima facie* obviousness of claims 1, 11 and 21 (and those dependent therefrom) has not been established.

Hence, Joao and Andreiko, singly or in combination with each other, can neither anticipate nor render the invention obvious. Withdrawal of the §103 rejection is respectfully requested.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged.

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If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 408.470.1000.

Respectfully submitted,

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